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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
LAI, MICHAEL C				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/699,294

Applicant(s)

ANSCHUTZ ET AL.

Examiner

MICHAEL C. LAI

Art Unit

2457

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This office action is responsive to communication filed on 6/11/2010.

Claims 1-14 and 16-33 have been examined.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/11/2010 has been entered.

Response to Amendment

3. The examiner has acknowledged the amended claims 1, 11, 13, 14, 16, 19, 21, 22, 27, 28, 33, and the cancelled claim 15. The objection to the specification has been corrected and withdrawn accordingly. Claims 1-14 and 16-33 are pending.

Response to Arguments

4. Applicant's arguments with respect to the 103(a) rejection to claim 1 have been considered but are moot because those features are not in the claim.
5. Applicant's arguments with respect to the 103(a) rejections to amended independent claims 11, 16, 22, and 28 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the 112 second paragraph and 101.

Specification

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).
Correction of the following is required: Applicant fails to provide antecedent basis for the claim terminologies "connection module" and "management module" in claim 1, "input module" and "control module" in claim 16.

Claim Objections

7. Claims 11 and 16 are objected to because of the following informalities: the term "demultiplexer" should be "demultiplexer".

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 1-14 and 16-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "accepting inputs and providing outputs to various types of voice and non-voice data networks" in lines 5-6. It is unclear where the inputs are from.

Claim 1 recites the limitation "the management module cooperating with the connection module to accept data from the voice and non-voice data networks for routing, the management module instructing a frequency demultiplexer to demultiplex a received multi-frequency signal into separate frequency

components, the management module instructing the processor to receive voice signals at a telephony interface and to separate the voice signals from data signals, the management module routing the voice signals to a multi-frequency path in a frequency crossbar, the multi-frequency path associated with the telephony interface, the frequency crossbar bridging the multi-frequency path to an output port, such that the output port is determined based on a frequency of the voice signals" in lines 7-16. Claim 1 is a system claim comprising a processor, a connection module, and a management module. It is unclear whether the frequency demultiplexer, the frequency crossbar, and the output ports are part of the system or not. It is also unclear how these components are interacting with the system. Note that Figure 5 and paragraphs [0040]-[0043] show these components, together with data switch 532, are part of the network topology and bandwidth management device 500.

Claim 11 recites the limitations "separating telephony signals from digital subscriber line signals; routing the telephony signals to an input of a frequency demultiplexer; sending the telephony signals from an output of the frequency demultiplexer to an input of a frequency crossbar that bridges inputs to different transceivers and to different telephony ports; bridging the output of the frequency demultiplexer in the frequency crossbar to one of the telephony ports based on a frequency of the voice signals" in lines 5-12. It is unclear when and where this separating occurs and who does the routing. Note that Figure 5 shows the frequency demultiplexer does the separating, the routing, and the sending.

Claim 11 recites the limitation "the voice signals" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitations "routing the telephony signals to an input of a frequency demultiplexer ... routing the digital subscriber line signals to the input of the frequency demultiplexer" in lines 7 and 13-14. It is unclear whether the telephony signals and the digital subscriber line signals share the same input or not.

Claim 11 recites the limitations "receiving Ethernet signals at a transceiver and bridging the Ethernet signals in the frequency crossbar to a different one of the telephony ports" in lines 20-21. It is unclear how the Ethernet signals reach the frequency crossbar. It is also unclear how the Ethernet signals are being processed by the data switch 532 as showed in Figure 5.

Independent claims 16, 22, and 28 recite similar limitations as claim 11 and are rejected for the same reason as for claim 11.

Claim 16 recites the limitations "the control module: separating... routing the telephony signals to an input of a frequency demultiplexer...telephony ports...a frequency crossbar...a transceiver". Claim 16 is an apparatus claim comprising an input module and a control module. It is unclear whether the frequency demultiplexer, the frequency crossbar, the telephony ports, and the transceiver are part of the apparatus or not. It is also unclear how these components are interacting with the apparatus. Note that Figure 5 and paragraphs [0040]-[0043]

show these components, together with data switch 532, are part of the network topology and bandwidth management device 500.

Independent claim 28 recites similar limitations as claim 16 and is rejected for the same reason as for claim 16.

All dependent claims are necessarily rejected as being dependent upon the rejected claims.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 28-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 28-33 recite the limitation of "computer-readable medium" in line 1. The broadest reasonable interpretation of a claim drawn to a computer readable medium typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. See MPEP 2111.01. These claims are rejected because the claimed invention is directed to non-statutory subject matter. Suggestion: use "non-transitory computer readable storage medium".

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edson (US 6,526,581 B1, hereinafter Edson), and in view of Rudish et al. (US 4,839,894, hereinafter Rudish).

Regarding claim 1, Edson discloses a system providing network topology and bandwidth management comprising:

a processor executing a connection module and a management module stored in memory [FIG. 4, microprocessor 59 and memory 60];

the connection module accepting inputs and providing outputs to various types of voice and non-voice data networks [FIG.4 and col. 13, lines 24-63, RJ11 connectors and HPNA interface 63]; and

the management module cooperating with the connection module to accept data from said voice and non-voice data networks for routing [col. 3 line 46 through col. 5 line 6, the gateway], the management module instructing the processor to receive voice signals at a telephony interface and to separate the voice signals from data signals [col. 5 line 58 through col. 6 line 9].

Edson discloses the claimed invention except for: the management module instructing a frequency demultiplexer to demultiplex a received multi-frequency signal into separate frequency components, the management module routing the voice signals to a multi-frequency path in a frequency crossbar, the multi-frequency path associated with the telephony interface, the frequency crossbar bridging the multi-frequency path to an output port, such that the output port is determined based on a frequency of the voice signals. However, Rudish discloses a multiplexer/demultiplexer for combining/separating a large number of contiguous frequency channels in microwave bands while incurring low insertion loss, and a Butler matrix to combine signal samples selectively at different output ports for different input signal frequencies [see abstract]. Rudish further discloses providing a frequency channelizer for directing a signal applied at its input to one of its many output ports, the specific output port being determined by the frequency of the signal applied to the input [see col. 2, lines 62-66]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Rudish's teaching into Edson's system for the purpose of allowing multi-frequency signals traveling on the same connection by using a frequency demultiplexer to demultiplex a received multi-frequency signal into separate frequency components and routing the voice signals to a multi-frequency path in a frequency crossbar for bridging the multi-frequency path to an output port, such that the output port is determined based on a frequency of the voice signals, thereby enabling transmitting a number of separate frequency

signals simultaneously over a single channel or line and reducing cost in a home network.

Regarding claim 2, Edson further discloses wherein the management module comprises a plurality of network adapters for use to connect to various voice and non-voice data networks [col. 3, lines 23-25].

Regarding claim 3, Edson further discloses a control circuit, the control circuit executing one or more instructions for use to determine an origination of the data and a destination of the data [col. 3, lines 49-53, "The processor of the gateway executes a software program to perform routing control..."].

Regarding claim 4, Edson further discloses wherein the control circuit selects an appropriate network adapter based on the origination and destination of the data [col. 10, lines 59-65, "packet switch routing"].

Regarding claim 5, Edson further discloses wherein the network adapters comprise any of: HPNA adapter, coaxial network adapter, Ethernet network adapter, wireless network adapter, POTS adapters, and power line network adapters [col. 3, lines 23-25, adapters; col. 7 line 58 through col. 8 line 2, HPNA].

Regarding claim 6, Edson further discloses wherein the data is processed according to a type of adapter [col. 3, lines 23-25, "Adapters or interface cards supporting the physical and software interfaces can provide in-home network access for virtually any type of electronic device."].

Regarding claim 7, Edson further discloses a computing application, the computing application having a user interface for use in configuring the

connection and management modules [col. 11, lines 10-19, "The operating system and communication application are designed to automatically detect a new device and interface when connected to the network 11 and to interact with such a new device interface to configure the gateway and the new interface to enable communications through the system 11"].

Regarding claim 8, Edson further discloses wherein the voice data networks comprise the public switched telephone network [col. 2, lines 58-60, PSTN; col. 4, lines 20-35, POTS].

Regarding claim 9, Edson further discloses wherein the non-voice data networks comprise any of the Internet, a LAN, a WAN, and a peer-to-peer network [col. 5, lines 47-50, WAN].

Regarding claim 10, Edson further discloses wherein the management module is capable of processing various data communication protocols comprising any of IP, Ethernet and ATM [col. 10, lines 50-55, Ethernet].

Allowable Subject Matter

14. Claims 11, 16, 22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
15. Claim 28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and 101, set forth in this Office action.
16. Claims 12-14, 17-21, 23-27, and 29-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).
18. Meenan et al., US Patent Number 7,315,886 B1, has taught a home-networking gateway providing a service to a device on a home network by transparently accessing a capability of a different device on the home network.
19. Humpleman et al., US Patent Number 7,039,858 B2, has taught a home entertainment system having a number of devices connected by a serial bus.

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL C. LAI whose telephone number is (571)270-3236. The examiner can normally be reached on M-F 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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13JUL2010

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